

In the Claims:

Please amend claims 1, 7, 9 and 11 as set forth below in the "Listing of Claims".

LISTING OF CLAIMS

Claim 1 (Currently Amended): A bank note bundling machine comprising:

a bank note bundling unit including a bundling space into which a bank note stack is loaded, the bundling unit being configured to bundle the bank note stack loaded into the bundling space with a bundling tape;

a tape reel for holding the bundling tape in a wound state;

a tape feed unit having a tape feed passage, the tape feed unit being configured to feed the bundling tape pulled out from the tape reel to the bundling unit and to extend a part, pulled out at a predetermined time in a tape feed process, of the bundling tape with a leading end part of the bundling tape projecting into the bundling space of the bundling unit;

a tape winding unit provided with a movable tape gripper for gripping the leading end part of the bundling tape projecting from the terminal end of the tape feed passage into the bundling space at a tape gripping position, the tape winding unit being configured to wind the bundling tape round the bank note stack by moving the tape gripper gripping around the bank note stack with the leading end part of the bundling tape gripped by the tape gripper;

a tape carrying mechanism placed on the tape feed passage to perform a forward feed operation to feed the bundling tape forward such that the bundling tape wound round the bank note stack by the tape gripper has a predetermined slack and a reverse feed operation to reverse the bundling tape so that the slack in the bundling tape is taken up and the bundling tape is tightened; and

a cutting-and-bonding unit placed in the bundling unit to cut off a trailing end of the tightened bundling tape and heat-bonding the leading end and the trailing end of the bundling tape,

characterized in that the tape reel holds a common bundling tape to be used for bundling bank notes of different denominations,

the bank note bundling machine further comprising:

a printing mechanism placed in the tape feed passage to print the bundling tape with a plurality of colors, each of said colors indicating a denomination of a corresponding one of the bank note stacks to be bundled; and

a controller controlling the tape carrying mechanism and the printing mechanism, and the controller executes: (a) a first operation for setting the leading end of the bundling tape at a print starting position upstream of a terminal end of the tape feed passage in preparation for bundling the bank note stack loaded into the bundling space and advancing the leading end of the bundling tape upon a start of a bundling process from the print starting position to the tape gripping position in the bundling unit; (b) a second operation for printing the bundling tape with the color indicating the denomination by the printing mechanism in a tape feed period in which the leading end of the bundling tape is advanced and/or the tape carrying mechanism is in the forward feed operation so that an outermost layer of the bundling tape bundling the bank notes is substantially wholly printable with the color; and (c) a third operation for moving the leading end of the following bundling tape, after cutting off the bundling tape, to the print starting position by the reverse feed operation of the tape carrying mechanism to prepare for the next bundling process.

Claim 2 (Original): The bank note bundling machine according to claim 1, further comprising a mode specifying unit for instructing the controller to select either of a print mode and a nonprint mode; wherein the controller executes, at the start of the bundling process, an operation for setting the leading end of the bundling tape at the print starting position when the

mode specifying unit specifies the print mode, and setting the leading end of the bundling tape at the print starting position or at the tape gripping position when the mode specifying unit specifies the nonprint mode.

Claim 3 (Original): The bank note bundling machine according to claim 1, further comprising a denomination input unit for inputting the denomination of bank notes to be bundled into the controller, wherein the controller controls the tape carrying mechanism and the printing mechanism to adjust a length of the bundling tape necessary for bundling each bank note stack and a length of a part to be printed of the bundling tape on the basis of the denomination input by the denomination input unit.

Claim 4 (Original): The bank note bundling machine according to claim 1, further comprising a bank note bundle size input unit for inputting the number of bank notes in each bank note stack to be bundled into the controller, wherein the controller controls the tape carrying mechanism and the printing mechanism to adjust a length of the bundling tape necessary for bundling each bank note stack and a length of a part to be printed of the bundling tape on the basis of the number of bank notes input by the bank note bundle size input unit.

Claim 5 (Original): The bank note bundling machine according to claim 1, further comprising a denomination input unit and a bank note bundle size input unit respectively for inputting the denomination and the number of bank notes in each bank note stack to be bundled, wherein the controller controls the tape carrying mechanism and the printing mechanism to adjust a length of the bundling tape necessary for bundling each bank note stack and a length of a part to be printed of the bundling tape on the basis of the denomination and the number of bank notes input by the denomination input unit and the bank note bundle size input unit, respectively.

Claim 6 (Original): The bank note bundling machine according to claim 1, wherein the printing mechanism comprises:

a rotating disk rotatably supported opposite to one of opposite surfaces of the bundling tape extended along the tape feed passage;

a plurality of color stamping rollers, respectively for printing the bundling tape with different colors, arranged on a common circle on and rotatably supported on the rotating disk; and

an impression cylinder supported for movement toward and away from the tape feed passage, the impression cylinder being configured to press the bundling tape against one of the color stamping rollers disposed opposite to one of the surfaces of the bundling tape extended along the tape feed passage.

Claim 7 (Currently Amended): A bank note bundling machine comprising:

a bank note bundling unit including a bundling space into which a bank note stack is manually loaded, the bundling unit being configured to bundle the bank note stack loaded into the bundling space with a bundling tape;

a tape reel for holding the bundling tape in a wound state;

a tape feed unit having a tape feed passage, the tape feed unit being configured to feed the bundling tape pulled out from the tape reel to the bundling unit and to extend a part, pulled out at a predetermined time in a tape feed process, of the bundling tape with a leading end part of the bundling tape projecting into the bundling space of the bundling unit;

a tape winding unit provided with a movable tape gripper for gripping the leading end part of the bundling tape projecting from the terminal end of the tape feed passage into the bundling space at a tape gripping position, the tape winding unit being configured to wind the bundling tape round the bank note stack by moving the tape gripper gripping around the bank note stack with the leading end part of the bundling tape gripped by the tape gripper;

a tape carrying mechanism placed on the tape feed passage to perform a forward feed operation to feed the bundling tape forward such that the bundling tape wound round the bank note stack by the tape gripper has a predetermined slack and a reverse feed

operation to reverse the bundling tape so that the slack in the bundling tape is taken up and the bundling tape is tightened; and

a cutting-and-bonding unit placed in the bundling unit to cut off a trailing end of the tightened bundling tape and heat-bonding the leading end and the trailing end of the bundling tape,

characterized in that the tape reel holds a common bundling tape to be used for bundling bank notes of different denominations,

the bank note bundling machine further comprising:

a printing mechanism placed in the tape feed passage to print the bundling tape with a plurality of colors, each of said colors indicating a denomination of a corresponding one of the bank note stacks to be bundled;

a denomination input unit for inputting automatically or manually the denomination of bank notes to be bundled; and

a controller controlling the tape carrying mechanism and the printing mechanism on the basis of the denomination input by the denomination input unit, and the controller executes: (a) a first operation for placing the leading end of the bundling tape at a print starting position upstream of a terminal end of the tape feed passage in preparation for bundling the bank note stack loaded into the bundling space and advancing the leading end of the bundling tape upon a start of a bundling process from the print starting position to the tape gripping position in the bundling unit; (b) a second operation for printing the bundling tape with the color indicating the denomination by the printing mechanism in a tape feed period in which the leading end of the bundling tape is advanced and/or the tape carrying mechanism is in the forward feed operation so that an outermost layer of the bundling tape bundling the bank notes is substantially wholly printable with the color; and (c) a third operation for moving the leading end of the following bundling tape, after cutting off the bundling tape, to the print starting position by the reverse feed operation of the tape carrying mechanism to prepare for the next bundling process.

Claim 8 (Original): The bank note bundling machine according to claim 7, wherein the printing mechanism comprises:

- a rotating disk rotatably supported opposite to one of opposite surfaces of the bundling tape extended along the tape feed passage;

- a plurality of color stamping rollers, respectively for printing the bundling tape with different colors, arranged on a common circle on and rotatably supported on the rotating disk; and

- an impression cylinder supported for movement toward and away from the tape feed passage, the impression cylinder being configured to press the bundling tape against one of the color stamping rollers disposed opposite to one of the surfaces of the bundling tape extended along the tape feed passage.

Claim 9 (Currently Amended): A bank note bundling machine comprising:

- a bank note stacker for stacking a predetermined number of bank notes of a specific denomination in a bank note stack;

- a bank note bundling unit including a bundling space into which the bank note stack is loaded from the stacker, the bundling unit being configured to bundle the bank note stack loaded into the bundling space with a bundling tape;

- a bank note stack carrying mechanism for carrying a bank note stack prepared by stacking a predetermined number of bank notes in the stacker from the stacker to the bundling unit after the bundling unit has been set ready for a bank note bundling operation;

- a tape reel for holding the bundling tape in a wound state; a tape feed unit having a tape feed passage, the tape feed unit being configured to feed the bundling tape pulled out from the tape reel to the bundling unit and to extend a part, pulled out at a predetermined time in a tape feed process, of the bundling tape with a leading end part of the bundling tape projecting into the bundling space of the bundling unit;

a tape winding unit provided with a tape gripper rotatable about an axis, the tape gripper being configured to grip the leading end part of the bundling tape projecting from the terminal end of the tape feed passage into the bundling space at a tape gripping position, the tape winding unit being configured to wind the bundling tape round the bank note stack by rotating the tape gripper toward and stopping at a bank note stack setting position for allowing the bank note stack to be loaded into the bundling space and rotating the tape gripper ~~so as to wind the bundling tape round the loaded~~ around the bank note stack with the leading end part of the bundling tape gripped by the tape gripper;

a tape carrying mechanism placed on the tape feed passage to perform a forward feed operation to feed the bundling tape forward such that the bundling tape wound round the bank note stack by the tape gripper has a predetermined slack and a reverse feed operation to reverse the bundling tape so that the slack in the bundling tape is taken up and the bundling tape is tightened;

a cutting-and-bonding unit placed in the bundling unit to cut off a trailing end of the tightened bundling tape and heat-bonding the leading end and the trailing end of the bundling tape,

characterized in that the tape reel holds a common bundling tape to be used for bundling bank notes of different denominations,

the bank note bundling machine further comprising:

a printing mechanism placed on the tape feed passage to print the bundling tape with a plurality of colors, each of said colors indicating a denomination of a corresponding one of the bank note stacks to be bundled; and

a controller controlling the tape carrying mechanism, the printing mechanism, the winding unit and the cutting-and-bonding unit, and the controller executes: (a) a first operation for setting the leading end of the bundling tape at a print starting position upstream of a terminal end of the tape feed passage in preparation for bundling the bank note stack loaded into the bundling space and advancing the leading end of the bundling tape upon a start of a bundling process from the print starting position to the tape gripping position in the bundling unit;

(b) a second operation for printing the bundling tape with the color indicating the denomination by the printing mechanism in when the leading end of the bundling tape is advanced and/or when the tape feed unit is in the forward feed operation so that an outermost layer of the bundling tape bundling the bank note stack is substantially wholly printable with the color; and (c') a third operation for moving the leading end of the following bundling tape to the print starting position by the reverse feed operation of the tape carrying mechanism to prepare for the next bundling process, after rotating the tape gripper from the tape gripping position to the bank note setting position, loading the bank note stack into the bundling space, bundling the bank note stack with the bundling tape by the tape winding unit, tightening the bundling tape bundling the bank note stack and cutting off the tightened bundling tape.

Claim 10 (Original): The bank note bundling machine according to claim 9, wherein the printing mechanism comprises:

a rotating disk rotatably supported opposite to one of opposite surfaces of the bundling tape extended along the tape feed passage;

a plurality of color stamping rollers, respectively for printing the bundling tape with different colors, arranged on a common circle on and rotatably supported on the rotating disk; and

an impression cylinder supported for movement toward and away from the tape feed passage, the impression cylinder being configured to press the bundling tape against one of the color stamping rollers disposed opposite to one of the surfaces of the bundling tape extended along the tape feed passage.

Claim 11 (Currently Amended): A bank note bundling machine comprising:

a plurality of bank note stackers each for stacking a predetermined number of bank notes of a specific denomination in a bank note stack;

a bank note bundling unit including a bundling space into which the bank note stack is loaded from one of the stackers, the bundling unit being configured to bundle the bank note stack loaded into the bundling space with a bundling tape;

a bank note stack carrying mechanism for holding a bank note stack prepared by stacking a predetermined number of bank notes by at least one of the stackers and carrying the bank note stack from the stacker to the bundling unit after the bundling unit has been set ready for a bank note bundling operation;

a tape reel for holding the bundling tape in a wound state;

a tape feed unit having a tape feed passage, the tape feed unit being configured to feed the bundling tape pulled out from the tape reel to the bundling unit and to extend a part, pulled out at a predetermined time in a tape feed process, of the bundling tape with a leading end part of the bundling tape projecting into the bundling space of the bundling unit;

a tape winding unit provided with a tape gripper rotatable about an axis, the tape gripper being configured to grip the leading end part of the bundling tape projecting from the terminal end of the tape feed passage into the bundling space at a tape gripping position, the tape winding unit being configured to wind the bundling tape round the bank note stack by rotating the tape gripper toward and stopping at a bank note stack setting position for allowing the bank note stack to be loaded into the bundling space and rotating the tape gripper ~~so as to wind the bundling tape round the loaded~~ around the bank note stack with the leading end part of the bundling tape gripped by the tape gripper;

a tape carrying mechanism placed on the tape feed passage to perform a forward feed operation to feed the bundling tape forward such that the bundling tape wound round the bank note stack by the tape gripper has a predetermined slack and a reverse feed operation to reverse the bundling tape so that the slack in the bundling tape is taken up and the bundling tape is tightened;

a cutting-and-bonding unit placed in the bundling unit to cut off a trailing end of the tightened bundling tape and heat-bonding the leading end and the trailing end of the bundling tape,

characterized in that the tape reel holds a common bundling tape to be used for bundling bank notes of different denominations,

the bank note bundling machine further comprising:

a printing mechanism placed in the tape feed passage to print the bundling tape with a plurality of colors, each of said colors indicating a denomination of a corresponding one of the bank note stacks to be bundled, and

a controller controlling the tape carrying mechanism, the printing mechanism, the tape winding unit and the cutting-and-bonding unit, upon a completion of stacking a predetermined number of bank notes in at least one of the stackers and a setting of the bundling unit ready for bundling the bank note stack, and the controller executes: (a) a first operation for setting the leading end of the bundling tape at a print starting position upstream of a terminal end of the tape feed passage in preparation for bundling the bank note stack loaded into the bundling space and advancing the leading end of the bundling tape upon a start of a bundling process from the print starting position to the tape gripping position in the bundling unit; (b) a second operation for printing the bundling tape with the color indicating the denomination by the printing mechanism when the leading end of the bundling tape is advanced and/or when the tape feed unit is in the forward feed operation so that an outermost layer of the bundling tape bundling the bank note stack is substantially wholly printable with the color; and (c') a third operation for moving the leading end of the following bundling tape to the print starting position by the reverse feed operation of the tape carrying mechanism to prepare for the next bundling process, after rotating the tape gripper from the tape gripping position to the bank note setting position, loading the bank note stack into the bundling space, bundling the bank note stack with the bundling tape by the tape winding unit, tightening the bundling tape bundling the bank note stack and cutting off the tightened bundling tape.

Claim 12 (Original): The bank note bundling machine according to claim 11, wherein the printing mechanism comprises:

a rotating disk rotatably supported opposite to one of opposite surfaces of the bundling tape extended along the tape feed passage;

a plurality of color stamping rollers, respectively for printing the bundling tape with different colors, arranged on a common circle on and rotatably supported on the rotating disk; and

an impression cylinder supported for movement toward and away from the tape feed passage, the impression cylinder being configured to press the bundling tape against one of the color stamping rollers disposed opposite to one of the surfaces of the bundling tape extended along the tape feed passage.

Claim 13 (Previously Presented): The bank note bundling machine according to claim 1, wherein the tape winding unit further comprises an endless belt for moving the tape gripper.

Claim 14 (Previously Presented): The bank note bundling machine according to claim 7, wherein the tape winding unit further comprises an endless belt for moving the tape gripper.

Claim 15 (Previously Presented): The bank note bundling machine according to claim 9, wherein the tape winding unit further comprises an endless belt for rotating the tape gripper.

Claim 16 (Previously Presented): The bank note bundling machine according to claim 11, wherein the tape winding unit further comprises an endless belt for rotating the tape gripper.